0. Find a partner

1. Assume you are working on a device that must hold about 10 or so pieces of (true/false) data that you want to collect from a spying device. Assume the device will be located in an office.

2. Design a Data Structure (DS) to hold the values of your pieces of data, e.g., "the lights are on" == TRUE (Note: your solution will be using C, not C++).

3. Make a C project (not C++). Declare your DS (dynamically) for 1000 devices and have your program print out how much RAM will be used to hold your DS.

4. Write a (max) 10-word description of your data structure on the board and the memory footprint (bytes) to hold the info for 1000 devices.

At this point, we'll have a brief commercial interlude.

5. Download the Starter Kit from onCourse. This is a program that emulates the scanning of products at a store at the checkout. Walkthrough the code with your partner. Make sure you can explain the tricky parts of this code.

6. Convert the "store" example to an emulation of your spy device. **You only have to get this working for ONE DEVICE** (not 1000).

Call me over for a simulation of the collection and output of your "collected" data.

7. Add a function to your project:

```
void printBin(short n);
```

to print the integer (n) in $base_2$ (binary), e.g.,

```
Data for the number 15 in binary is:

0000000000001111
```